**What is Claimed is:**

1. A powder batch comprising phosphor particles capable upon excitation of emitting radiation in the visible and ultraviolet spectral range, wherein said phosphor particles have an average particle size of from about 0.1 to about 5 $\mu$m and a particle size distribution wherein at least about 90 percent by number of said particles are smaller than twice said average particle size.

2. A powder batch as recited in Claim 1, wherein at least about 95 percent of said particles are smaller than twice said average size.

3. A powder batch as recited in Claim 1, wherein at least about 90 percent of said particles are smaller than 1.5 times said average size.

4. A powder batch as recited in Claim 1, wherein said phosphor particles have an average particle size of from about 0.5 to about 2 $\mu$m.

5. A powder batch as recited in Claim 1, wherein said phosphor particles comprise a host-material selected from the group consisting of sulfides, oxides, borates, phosphates, halides, oxysulfides and thiogallates.

6. A powder batch as recited in Claim 5, wherein said phosphor particles comprise a host-material selected from the group consisting of zinc sulfide, yttria, yttrium oxysulfides, thiogallates and zinc silicates.

7. A powder batch as recited in Claim 6, wherein said phosphor particles further comprise at least a first activator ion.

8. A powder batch as recited in Claim 1, wherein said phosphor particles have an average crystallite size of at least about 50 nanometers.

9. A powder batch as recited in Claim 1, wherein said average crystallite size is at least about 80 percent of said average particle size.

10. A powder batch as recited in Claim 1, wherein said phosphor particles are substantially spherical.

11. A powder batch as recited in Claim 1, wherein said phosphor particles are substantially non-agglomerated.

12. A powder batch as recited in Claim 1, wherein said phosphor particles comprise a substantially uniform coating on an outer surface thereof.

13. A powder batch as recited in Claim 1, wherein said phosphor particles comprise a host material and from about 0.001 to about 5 weight percent of an activator ion, wherein said host material is an oxide selected from the group consisting of $Y_2O_3$, $BaMgAl_{11}O_{17}$ and ZnO and said activator ion is selected from the group consisting of Eu and Zn.

14. A powder batch as recited in Claim 13, wherein said phosphor particles comprise from about 0.02 to about 0.5 weight percent of said activator ion.

15. A powder batch as recited in Claim 1, wherein said phosphor particles comprise a host material and from about 0.001 to about 5 weight percent of an activator ion, wherein said host material is a Group II metal sulfide and said activator ion is selected from the group consisting of Cu, Ce, Mn, Ag, Al, Au or Cl.

16. A powder batch as recited in Claim 15, wherein said phosphor particles comprise from about 0.02 to 0.5 weight percent of said activator ion.

17. A powder batch comprising phosphor particles wherein said phosphor particles are substantially spherical, have an average particle size of from about 0.1 to about 5 $\mu$m and a particle size distribution wherein at least about 90 percent by number of said particles are smaller than twice said average size and wherein said phosphor particles comprise at least a first coating on an outer surface thereof.

18. A powder batch as recited in Claim 17, wherein said coating substantially fully encapsulates said phosphor particles.

19. A powder batch as recited in Claim 17, wherein said coating is a substantially uniform non-particulate coating.

20. A powder batch as recited in Claim 17, wherein said coating is a substantially uniform particulate coating.

21. A powder batch as recited in Claim 17, wherein said coating is a non-uniform particulate coating.

22. A powder batch as recited in Claim 17, wherein said coating is a composite coating of a particulate and film coating.

23. A powder batch as recited in Claim 17, wherein said coating has an average thickness of equal to or less than about 1 $\mu$m.

24. A powder batch as recited in Claim 17, wherein said coating has an average thickness of from about 5 to about 100 nanometers.

25. A powder batch as recited in Claim 17, wherein said coating comprises a material selected from the group consisting of metal oxides, metal sulfides and oxysulfides.

26. A powder batch as recited in Claim 25, wherein said coating is selected from the group consisting of silica, alumina, tin oxide and indium oxide.

27. A powder batch as recited in Claim 17, wherein said phosphor particles further comprise a second coating substantially fully encapsulating said first coating.

28. A powder batch as recited in Claim 17, wherein the average crystallite size of

said phosphor particles is at least about 80 percent of said average particle size of said phosphor particles.

29. A powder batch as recited in Claim 17, wherein said phosphor particles are substantially spherical.

30. A method for making a powder batch comprising a plurality of phosphor particles, comprising the steps of:

(a) providing a solution comprising a phosphor particle precursor;

(b) forming a plurality of solution droplets from said solution;

(c) moving said droplets in a carrier gas;

(d) classifying said droplets to remove substantially all droplets having a size of greater than about 3 times the average droplet size and less than about 1/3 the average droplet size; and

(e) passing said droplets through a heating zone having a temperature of up to about 1800°C.

31. A method for making a powder batch as recited in Claim 30, wherein said phosphor particles are selected from the group consisting of metal sulfides, metal oxides, metal halides, oxysulfides, borates and silicates.

32. A method for making a powder batch as recited in Claim 30, wherein the concentration of precursor in said solution is less than about 50 weight percent.

33. A method for making a powder batch as recited in Claim 30, wherein said step of forming solution droplets comprises contacting said solution with transducers at a frequency of from about 1.6 to about 2.4 MHZ.

34. A method for making a powder batch as recited in Claim 30, wherein said carrier gas is selected from nitrogen, air and oxygen.

35. A method for making a powder batch as recited in Claim 30, wherein said classifying step comprises subjecting said solution droplets to an impactor.

36. A method for making a powder batch as recited in Claim 35, wherein said classifying step further comprises subjecting said solution droplets to a virtual impactor.

37. A method for making a powder batch as recited in Claim 30, wherein the residence time in said heating zone is from about 0.01 to about 100 seconds.

38. A method for making a powder batch as recited in Claim 30, wherein the residence time in said heating zone from about 0.1 to about 10 seconds

39. A method for making a powder batch as recited in Claim 30, wherein said particles have an average particle size of from about 0.1 to about 10 $\mu$m.

40. A method for making a powder batch as recited in Claim 30, wherein said droplets are classified to remove substantially all droplets having a size greater than about 2 times the average droplet size and less than about ½ the average droplet size.